

High Frequency Reflective Mesh for Small Aperture Antennas, Phase I

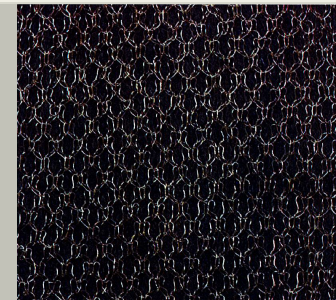
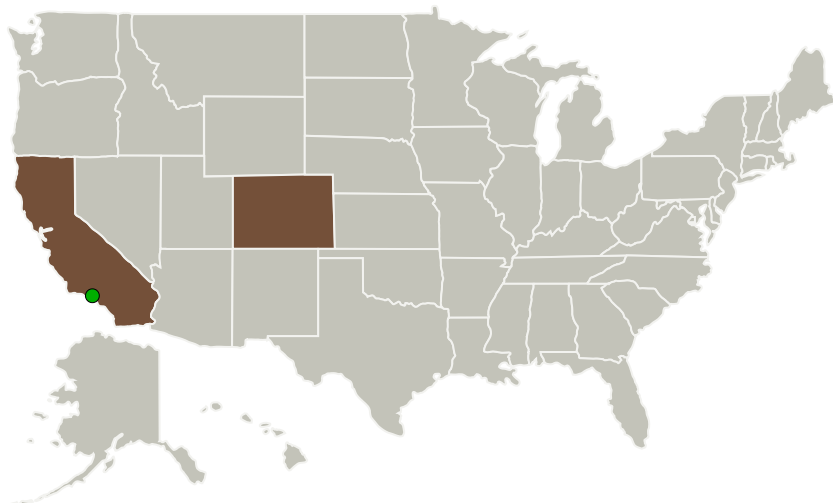


Completed Technology Project (2016 - 2016)

Project Introduction

The proposed Phase I program would develop and prototype a high frequency, high performance reflective mesh that is well suited to the emerging small aperture antenna designs. The program will review heritage mesh architectures and trade them against new designs. New materials and manufacturing methods will be evaluated with the goal of making low-cost mesh for CubeSat missions. The mesh samples will be tested to determine their mechanical stiffness properties. RF test samples will be delivered to NASA JPL.

Primary U.S. Work Locations and Key Partners



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for Small Aperture Antennas,
Phase I

Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Project Transitions	2
Images	2
Organizational Responsibility	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	3
Target Destinations	3

Organizations Performing Work	Role	Type	Location
Tendeg LLC	Lead Organization	Industry Small Disadvantaged Business (SDB)	Louisville, Colorado
● Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California

Primary U.S. Work Locations

California	Colorado
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Project Transitions



June 2016: Project Start

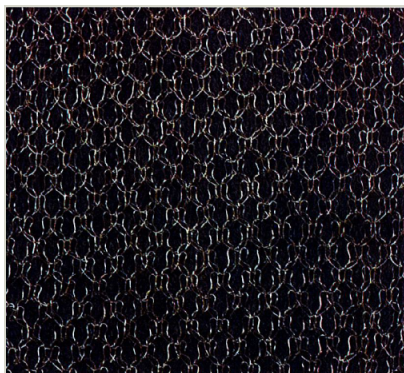


December 2016: Closed out

Closeout Documentation:

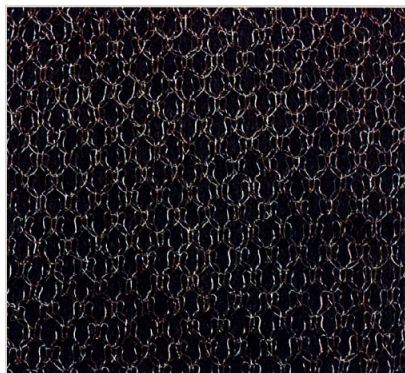
- Final Summary Chart(<https://techport.nasa.gov/file/139803>)

Images



Briefing Chart Image

High Frequency Reflective Mesh for Small Aperture Antennas, Phase I
(<https://techport.nasa.gov/image/134815>)



Final Summary Chart Image

High Frequency Reflective Mesh for Small Aperture Antennas, Phase I
Project Image
(<https://techport.nasa.gov/image/126565>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Tendeg LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

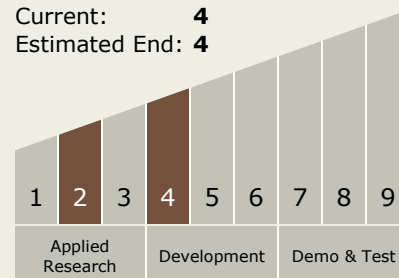
Carlos Torrez

Principal Investigator:

Gregg Freebury

Technology Maturity (TRL)

Start: 2
Current: 4
Estimated End: 4



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.4 Microwave, Millimeter-, and Submillimeter-Waves

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System